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Timothy G. Offerle

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Dickinson Wright PLLC
38525 Woodward Avenue
Suite 2000
Bloomfield Hills, MI 48304

EXAMINER

SCHWARTZ, CHRISTOPHER P

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1 UNITED STATES PATENT AND TRADEMARK OFFICE

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4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES
6

7
8 *Ex parte* TIMOTHY G. OFFERLE, CRAIG H. STEPHAN
9 and DOUGLAS S. RHODE
10

11
12 Appeal 2009-001782
13 Application 10/708,676
14 Technology Center 3600
15

16
17 Decided: September 25, 2009
18

19
20 Before WILLIAM F. PATE, III, JOHN C. KERINS, and
21 FRED A. SILVERBERG, *Administrative Patent Judges*.

22
23 SILVERBERG, *Administrative Patent Judge*.
24

25
26 DECISION ON APPEAL

1 STATEMENT OF THE CASE

2 Timothy G. Offerle et al. (Appellants) seek our review under
3 35 U.S.C. § 134 of the final rejection of claims 1-35. We have jurisdiction
4 under 35 U.S.C. § 6(b) (2002).

5
6 SUMMARY OF DECISION

7 We AFFIRM-IN-PART.

8
9 THE INVENTION

10 The Appellants' claimed invention is directed to the tracking of a
11 trailer 160 behind a vehicle 10 (Spec.: ¶ [0008]).

12 Claim 1, reproduced below, is representative of the claimed subject
13 matter on appeal:

- 14 1. A method of controlling a vehicle
15 comprising:
16 determining a straight position of the trailer
17 using a trailer sensor during forward motion of the
18 vehicle; and controlling the vehicle to maintain the
19 trailer in the straight position.
20

21 THE REJECTIONS

22 The Examiner relies upon the following as evidence of
23 unpatentability¹:
24

¹ The Examiner has listed Kimbrough, Deng and Funke as references under the section Evidence Relied Upon (Ans. 2-3). However, none of the rejections on appeal have been based on Kimbrough, Deng or Funke. Further, the Examiner has also listed Lee under the section Grounds of Rejection (Ans. 4) as not being applied against the claims. Therefore, Kimbrough, Deng, Funke and Lee will not be considered in this appeal.

1	Gerum	US 5,747,683	May 5, 1998
2	Mizusawa	US 2002/0145663 A1	Oct. 10, 2002
3	Thiede ²	US 2003/0111902 A1	Jun. 19, 2003
4	McGregor	US 6,801,125 B1	Oct. 5, 2004

5

6 The following rejections by the Examiner are before us for review:

- 7 1. Claims 1-12, 14, 15, and 32-35 are rejected under 35 U.S.C. § 103(a)
8 as being unpatentable over Mizusawa in view of McGregor.
9 2. Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable
10 over Mizusawa in view of McGregor, and further in view of Thiede.
11 3. Claims 17-31 are rejected under 35 U.S.C. § 103(a) as being
12 unpatentable over Mizusawa in view of McGregor, and further in
13 view of Gerum.

14

15 ISSUES

16 The issues before us are whether: (1) the Examiner erred in finding
17 that the combined teachings of Mizusawa and McGregor would have led one
18 having ordinary skill in the art to a method of controlling a vehicle during
19 forward motion of the vehicle as called for in claim 1 (App. Br. 5); (2) the
20 Examiner erred in finding that the combined teachings of Mizusawa and
21 McGregor would have led one having ordinary skill in the art to determining
22 a position of a trailer using a locating plate having a locating hole on the
23 trailer as called for in claim 32 (App. Br. 7); and (3) the Examiner erred in
24 finding that the combined teachings of Mizusawa, McGregor and Gerum

² The Examiner has not listed Thiede as a reference under the section Evidence Relied Upon (Ans. 2-3). However, Thiede has been applied against claim 13 in the Grounds of Rejection (Ans. 6). Therefore, Thiede will be considered as a reference in this appeal.

1 would have led one having ordinary skill in the art to a secondary steering
2 actuator coupled to a controller, wherein the controller is programmed to
3 brake-steer the vehicle to maintain the vehicle in the desired trailer-turn
4 direction as called for in claim 17 (Reply Br. 5; App. Br. 7).

5
6 FINDINGS OF FACT

7 We find that the following enumerated findings are supported by at
8 least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d
9 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for
10 proceedings before the Office).

11 *The Examiner's Findings*

12 *Claims 1-12, 14 and 15*

- 13 1. The Examiner finds that Mizusawa describes all of the limitations
14 called for in claim 1, except that Mizusawa does not describe using
15 a trailer sensor during forward motion to determine a straight
16 position of the trailer as called for in claim 1 (Ans. 4).
- 17 2. The Examiner finds that McGregor describes using sensors [42] to
18 determine the alignment of the ball and socket connectors, that is, a
19 straight position of a trailer (col. 1, ll. 43-50) (Ans. 4).
- 20 3. The Examiner concludes that it would have been obvious to
21 provide Mizusawa with a sensor as taught by McGregor [at 42] to
22 determine the straight position of the trailer as the vehicle is moved
23 forward to line up the hitch ball with the hole/socket [coupler] on
24 the trailer (Ans. 4).
- 25 4. The Examiner finds that “[t]he limitation of ‘controlling the
26 vehicle to maintain the trailer in a straight position’ as broadly

1 claimed can be easily achieved by the driver (and mirror system on
2 the vehicle) alone.” (Ans. 4, 8).

3 *Claims 32-35*

4 5. The Examiner finds that the combined teachings of Mizusawa and
5 McGregor describe the limitations called for in claims 32-35 (Ans.
6 5).

7 6. The Examiner finds that the claimed locating plate having a
8 locating hole is an obvious alternative to the known vehicle/trailer
9 hitch connections (Ans. 8).

10 *Claims 17-31*

11 7. The Examiner finds that McGregor describes a steering actuator 38
12 (Ans. 6).

13 8. The Examiner finds that there is no clear mention of brake-steer in
14 either of Mizusawa or McGregor (Ans. 6).

15 9. The Examiner finds that Gerum describes that brake-steer is old
16 and well known in the art (col. 4, ll. 48-55; cls. 9, 10) (Ans. 6).

17 10. The Examiner finds that it would be obvious to apply the concept
18 of brake-steer to Mizusawa, as modified (Ans. 6).

19 *The Board's Findings*

20 11. Appellants have not contested the Examiner's findings as to the
21 combinability of the teachings of Mizusawa and McGregor (Reply
22 Br. 1 and App. Br. 5).

23 12. Additional findings as necessary appear in the Analysis portion of
24 this opinion.

25

PRINCIPLES OF LAW

Appellants' Burden

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)). *See also Ex parte Yamaguchi*, 88 USPQ2d 1606, 1614 (BPAI 2008) [burden on appeal] (on appeal, applicant must show examiner erred); *Ex parte Fu*, 89 USPQ2d 1115, 1123 (BPAI 2008); *Ex parte Catan*, 83 USPQ2d 1569, 1577 (BPAI 2007); and *Ex parte Smith*, 83 USPQ2d 1509, 1519 (BPAI 2007).

Obviousness

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 550 U.S. at 406-407 ("While the sequence of these questions

1 might be reordered in any particular case, the [*Graham*] factors continue to
2 define the inquiry that controls.”).

3
4 ANALYSIS

5 Appellants argue claims 1-12, 14 and 15 as a group (App. Br. 5). As
6 such, we select claim 1 as representative of the group, and claims 2-12, 14
7 and 15 will stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(vii) (2007).
8 In contesting the rejection of claim 13 under 35 U.S.C. § 103(a) as being
9 unpatentable over Mizusawa in view of McGregor and Thiede, Appellants
10 provide no further arguments regarding this claim than those presented for
11 claim 1 (App. Br. 7).

12
13 *Rejection of claims 1-12, 14, and 15 under 35 U.S.C. § 103(a) as being*
14 *unpatentable over Mizusawa in view of McGregor, and claim 13 as being*
15 *unpatentable over Mizusawa in view of McGregor, and further in view of*
16 *Thiede.*

17 *Regarding claim 1:* Appellants contend that the combined teachings
18 of Mizusawa and McGregor would not have led one having ordinary skill in
19 the art to a method of controlling a vehicle during forward motion of the
20 vehicle as called for in claim 1 (App. Br. 5). Appellants further contend that
21 both Mizusawa and McGregor describe a docking mode for a vehicle and a
22 trailer, and do not determine the straight position of a trailer relative to the
23 vehicle during forward motion as called for in claim 1 (Reply Br. 3; App. Br.
24 5-6).

25 We see no error in the Examiner’s findings that Mizusawa describes
26 all of the limitations called for in claim 1, except that Mizusawa does not
27 describe the trailer sensor called for in claim 1 (Fact 1). We see no error in

1 the Examiner's findings that McGregor describes sensors to determine a
2 straight position of a trailer (Fact 2).

3 Appellants have not contested the Examiner's findings as to the
4 combinability of the teachings of Mizusawa and McGregor (Fact 11).

5 We find that to connect the vehicle to the trailer, the vehicle could
6 simply drive along the side of the trailer to a position immediately in front of
7 the trailer. During such forward movement of the vehicle, the sensor 42
8 would determine when the vehicle and the trailer would be lined up for
9 hitching the ball to the socket, that is, the sensor 42 would determine when
10 the trailer was in line with the vehicle-a straight position of the trailer.

11 Therefore, we see no error in the Examiner's conclusion (Fact 3) and
12 conclude that it would have been obvious to a person having ordinary skill in
13 the art to provide Mizusawa with a sensor as taught by McGregor at 42 to
14 determine the straight position of the trailer.

15 We see no error in the Examiner's findings that the driver (and mirror
16 system on the vehicle) alone could control the vehicle to maintain the trailer
17 in a straight position (Fact 4). Further, we find that the driver (and mirror
18 system on the vehicle) could determine the straight position of the trailer
19 using the mirror, wherein the mirror would be the trailer sensor.

20 Therefore, we conclude that the Appellants have not demonstrated
21 that the Examiner erred in rejecting claim 1 over Mizusawa in view of
22 McGregor. The Appellants have likewise not demonstrated error in the
23 Examiner's rejection of claims 2-12, 14 and 15, which fall with claim 1.

24 *Regarding claim 13:* Appellants provide no further contentions
25 regarding claim 13 than those presented for claim 1 (App. Br. 7). Therefore,
26 for the reasons set forth above in our discussion of the rejection of claim 1,

1 we conclude that Appellants have not demonstrated that the Examiner erred
2 in rejecting claim 13 over Mizusawa in view of McGregor, and further in
3 view of Thiede.

4
5 *Rejection of claims 32-35 under 35 U.S.C. § 103(a) as being unpatentable*
6 *over Mizusawa in view of McGregor*

7 Appellants contend that the combined teachings of Mizusawa and
8 McGregor do not describe a locating hole in a locating plate as called for in
9 claim 32 (Reply Br. 4; App. Br. 7). Appellants further contend that a
10 locating plate having a locating hole is not an obvious modification (Reply
11 Br. 4).

12 The Examiner found (1) that the combined teachings of Mizusawa and
13 McGregor describe the limitations called for in claims 32-35 (Fact 5), and
14 (2) the claimed locating plate having a locating hole is an obvious alternative
15 to the known vehicle/trailer hitch connections (Fact 6).

16 We agree with Appellants that a locating plate having a locating hole
17 provides the advantage of avoiding potential damage to the trailer/hitch
18 connection caused by a ball and hitch not being exactly aligned before
19 connection is attempted (Reply Br. 4). Accordingly, we conclude that the
20 claimed locating plate having a locating hole is not an obvious alternative to
21 the known vehicle /trailer hitch connections.

22 Therefore, we conclude that Appellants have demonstrated that the
23 Examiner erred in rejecting claim 32 over Mizusawa in view of McGregor.
24 The Appellants have likewise demonstrated error in the Examiner's rejection
25 of claims 33-35, which depend from claim 32.

1 *Rejection of claims 17-31 under 35 U.S.C. § 103(a) as being unpatentable*
2 *over Mizusawa in view of McGregor, and further in view of Gerum*

3 Appellants contend that the combined teachings of Mizusawa,
4 McGregor and Gerum would not have led one having ordinary skill in the art
5 to a secondary steering actuator coupled to a controller, wherein the
6 controller is programmed to brake-steer the vehicle to maintain the vehicle
7 in the desired trailer-turn direction as called for in claim 17 (Reply Br. 5;
8 App. Br. 7-8). Appellants further contend that neither Mizusawa, McGregor
9 nor Gerum describe a secondary actuator as called for in claim 17 (App. Br.
10 8)

11 Claim 17 calls for, *inter alia*, “a controller coupled to the secondary
12 steering actuator, ... said controller programmed to brake-steer the vehicle to
13 maintain the vehicle in the desired trailer-turn direction.”

14 The Examiner found (1) that McGregor describes a steering actuator
15 38 (Fact 7), (2) that there is no clear mention of brake-steer in either of
16 Mizusawa or McGregor (Fact 8), (3) Gerum describes that brake-steer is old
17 and well known in the art (Fact 9), and (4) that it would be obvious to apply
18 the concept of brake-steer to Mizusawa, as modified (Fact 10).

19 However, the Examiner has not found, nor do we find, that the
20 combined teachings of Mizusawa, McGregor and Gerum describe a
21 secondary steering actuator coupled to a controller, wherein the controller is
22 programmed to brake-steer the vehicle to maintain the vehicle in the desired
23 trailer-turn direction as called for in claim 17.

24 Therefore, we conclude that Appellants have demonstrated that the
25 Examiner erred in rejecting claim 17 over Mizusawa in view of McGregor,
26 and further in view of Gerum. The Appellants have likewise demonstrated

1 error in the Examiner's rejection of claims 18-31, which depend from claim
2 17.

3
4 CONCLUSIONS OF LAW

5 Appellants have not established that the Examiner erred in finding that
6 the combined teachings of Mizusawa and McGregor would have led one
7 having ordinary skill in the art to a method of controlling a vehicle during
8 forward motion of the vehicle as called for in claim 1. Appellants have
9 established that the Examiner erred in finding that the combined teachings of
10 Mizusawa and McGregor would have led one having ordinary skill in the art
11 to determining the position of a trailer using a locating plate having a
12 locating hole on the trailer as called for in claim 32. Appellants have
13 established that the Examiner erred in finding that the combined teachings of
14 Mizusawa, McGregor and Gerum would have led one having ordinary skill
15 in the art to a secondary steering actuator coupled to a controller, wherein
16 the controller is programmed to brake-steer the vehicle to maintain the
17 vehicle in the desired trailer-turn direction as called for in claim 17.

18
19 DECISION

20 The decision of the Examiner to reject claims 1-12, 14, and 15 over
21 Mizusawa in view of McGregor, and claim 13 over Mizusawa in view of
22 McGregor, and further in view of Thiede is affirmed. The decision of the
23 Examiner to reject claims 32-35 over Mizusawa in view of McGregor, and
24 claims 17-31 over Mizusawa in view of McGregor, and further in view of
25 | Gerum, is reversed.

1 No time period for taking any subsequent action in connection with
2 this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

3
4 AFFIRMED-IN-PART

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8
9 mls

10
11
12 DICKINSON WRIGHT PLLC
13 38525 WOODWARD AVENUE
14 SUITE 2000
15 BLOOMFIELD HILLS, MI 48304